School District of South Milwaukee Bluestem Goldenrod
Conservation and Management Plan

Prepared by:

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February 18, 2003

1. Background of Project

The City of South Milwaukee passed a referendum on February 19, 2002, to allow the School District of South Milwaukee (SDSM) to build an expanded school campus development at the current high school site, located at the corner of 15th Avenue and Oak Creek Parkway in South Milwaukee, Wisconsin. The project includes building a new high school adjacent to the existing high school, converting the existing high school to a renovated middle school, and building supporting parking, athletic and practice fields, competition football stadium, and tennis courts. The SDSM project site includes property owned by SDSM, property leased by SDSM from Milwaukee County and property now owned by SDSM that was recently acquired from The Falk Corporation. These three properties are the location for the SDSM project site (Figure 1).

It has been determined that Bluestem Goldenrod is located on land owned by SDSM and land leased by SDSM from Milwaukee County. SDSM has worked to avoid and minimize potential impacts to the Bluestem Goldenrod found in parts of the property for this new campus. Various plans have been developed and revised to minimize the impact of Bluestem Goldenrod due to construction. This plan documents the process, specific strategies, and commitments by SDSM to conserve the Bluestem Goldenrod and its habitat in this project site. Please see Figure 2 for specific development plans.

The plan involves maintaining and restoring several natural areas. There will be retained wetlands, stormwater management wetlands and prairies, woodlands and green space throughout the property. Management of all habitat areas will occur through a concerted stewardship program involving professional stewardship experts and student and staff involvement. The stormwater management system will have no affect on the Bluestem Goldenrod population locations or their habitat, since all populations are above the elevations of stormwater management elements planned for the property.

Bluestem Goldenrod

The Bluestem Goldenrod is listed as Endangered in Wisconsin. It suffers from threats, notably habitat loss from land development, invasive woody and herbaceous plants spreading into choice habitat, and erosion and sedimentation of its preferred forested Wisconsin habitats. The Bluestem Goldenrod's range in Wisconsin is believed to be limited to southeastern Wisconsin on level ground and side slopes and protected ravine environments generally associated with Lake Michigan in Milwaukee and Racine Counties, with several other small outlying populations also present (personal

communication, D. Reed, SEWRPC and S. Apfelbaum, AES). The species ranges eastward and northward east of Lake Michigan and is found widely in protected micro-sites from northeastern U. S. through the southern Appalachians. The species occurs in northeastern Illinois in similar protected microsites along Lake Michigan, and in some disturbed settings along river terraces along the north branch of the Chicago River in Cook County, Illinois.

There were over 250 individual Bluestem Goldenrod plants surveyed (Figures 3 and 4) in the Rawson Woods buffer area and Oak Creek Parkway Woods. This plan addresses the conservation plans for incidental taking of three (3) isolated Bluestem Goldenrod plants. The taking is entirely resulting from proposed earthmoving and construction activities planned to take place in spring 2003. Highlighted in Figures 3 and 4, the three plants are located apart from and in isolation to other populations of the species.

Future habitat restoration management activities are designed to enhance the health of the ecological settings, including Bluestem Goldenrod habitat. As such, no additional takings or negative impacts on other individual plants are proposed.

Figure 3 illustrates the known occurrences of individual plant populations at the SDSM site, based on plant surveys conducted by SEWRPC, Milwaukee County and AES, in June-November, 2002. A core area and secondary habitat for Bluestem Goldenrod were identified and are depicted on Figure 3. Figure 4 provides an enlargement of these two habitat areas. The areas of habitat present are as follows:

- Rawson Woods Buffer: This is the area where the three (3) Bluestem Goldenrod plants will be taken. The area is an invasive fringe of trees and includes a highly degraded mesic forest remnant along the north edge of Rawson Woods. Its southern boundary is a dirt path that runs east-west north of the Rawson Woods' boundary. This area was stripped of vegetation and topsoils during the previous gravel quarry operations which created the slopes and the remnant pit to the north and in the former Falk property. The impact to this area is only in the northernmost portion where the three isolated Bluestem Goldenrod plants are located.

- Oak Creek Parkway Woods: This area is a mesic forest remnant just south of Oak Creek Parkway. It includes an overstory of native tree species including black cherry, red oak, basswood, box elder, maple and cottonwood, but is compromised by increasing numbers of invasive woody species such as siberian elm, black locust, tartarian honeysuckle and European buckthorn. Approximately 70 % of this site is dominated by a native tree canopy of 70-130 years of age, while 30% is dominated by the non-native tree species identified above. Understory shrubs are dominated by gray dogwood, tartarian honeysuckle and European buckthorn in 70-80% of the site. The Bluestem Goldenrod in this area will not be impacted by site development plans.

- Core Area: The largest population in the project site, and previously identified important habitat by SEWRPC is the entire Rawson Woods site. This area will not be impacted by site development plans.

Incidental taking is proposed to only occur in the area identified as the impact area, (Figures 3 and 4) described as follows:

- Impact Area. A small portion of the secondary habitat found just outside the Rawson Woods buffer will be directly impacted by grubbing existing trees and shrubs, and by grading activities (Figures 3 and 4). This area will be replaced with a practice/physical education play field that will be mowed grass. The impact will involve the taking of three (3) individual plants.

The secondary habitats found in the Rawson Woods buffer area and Oak Creek Parkway Woods will not be negatively impacted directly or indirectly by the site development plan or subsequent site restoration or management activities that will enhance these habitats (Figures 3 and 4). Additional individuals of Bluestem Goldenrod are known to exist south of the project site in the core area of Rawson Woods, based on past surveys by Milwaukee County and SEWRPC. These areas were not re-surveyed as part of this project. Likewise, the proposed project will not impact Rawson Woods and the Bluestem Goldenrod population that exists there.

2. Evaluation of Potential Impacts to Species

2.1 Impact to Core Habitat

The core area of Bluestem Goldenrod is located in Rawson Woods proper. There will be no impact to this core area.

2.2 Impact to Secondary Habitat

The only secondary habitat area that will be impacted by the proposed project is a small cluster of plants located to the north of Rawson Woods (Figures 3 and 4). Just outside the Rawson Woods buffer area three (3) individual plants will be taken as a result of the construction of a proposed practice field in the central portion of the area.

There will be no impact to the large clustered population of Bluestem Goldenrod located on the northern fringe of Rawson Woods. Neither will there be an impact to the large cluster located in the northwest corner of Rawson Woods. Additionally, there will be no impact to the Bluestem Goldenrod identified in the Oak Creek Parkway Woods. The access roadway location has been reviewed by at least three parties during mid summer – late Fall 2002 and will not impact any known Bluestem Goldenrod individuals.

2.3 Impacts from Student and Construction Access to Core and Secondary (non-impact) Habitat

SDSM will take steps to avoid activity and access into the core and secondary habitat areas. SDSM proposes to install orange plastic safety/snow fence to cordon off and restrict human intrusion and access to this area during the construction phase.

The general contractor, J.P. Cullen & Sons, Inc. will be responsible for maintaining the safety fence to keep students, construction personnel and other individuals out of Rawson Woods and the Bluestem Goldenrod areas. Formal inspections will be made once per week, with additional inspections on days after evening activities or if issues arise that suggest more formal inspections are necessary. If the fencing is compromised, J.P. Cullen will remedy the situation immediately. Any noncompliance found by any party (including SDSM, WDNR or other parties) should be communicated to J.P. Cullen immediately for correction.

2.4 Impacts from Flooding

The stormwater management plans for the property will not affect the Bluestem Goldenrod populations, including the core and secondary upland woodland habitats in the property. All populations are above floodwater management elevations planned for this property after site development.

2.5 Vegetation Management and Exotic Species Invasion Threat

Core and secondary habitat areas will benefit as a result of the restoration and management activities to occur such as the removal of exotic shrubs over the years. The effects of these activities will be positive on Bluestem Goldenrod and its habitats, and consequently are considered enhancements.

Long-term viability of Bluestem Goldenrod habitat will be addressed by a vegetation management program. The lack of vegetation management is a significant threat to Bluestem Goldenrod in core and non-impact secondary habitat areas. Garlic mustard (*Alliaria officinalis*), European buckthorn (*Rhamnus catharticus*) and other invasive and exotic species pose a serious threat to the core and secondary habitat of Bluestem Goldenrod. If open understory areas and oblique ameliorated light regimens change into dense shaded conditions, due to the unmanaged conversion of core and secondary habitat areas to dense woody vegetation and invasive ground story vegetation monocultures, these areas will become less suitable for Bluestem Goldenrod. Without restoration and stewardship activities to keep existing habitat areas free of exotic species and dense shade suppression, the Bluestem Goldenrod habitat and population will be lost in the area.

3. Actions to Avoid, Minimize and Mitigate Impacts

SDSM has avoided impacts to all core habitat and most of the secondary habitat by establishment of a site plan that avoids Rawson Woods and Oak Creek Parkway Woods. The district's commitment to the perpetual ecological management of all of the core habitat area and the remaining secondary habitat area will further minimize and mitigate impacts to the existing populations of Bluestem Goldenrod.

SDSM commits to minimize adverse impacts from the proposed SDSM project to the Bluestem Goldenrod population as follows:

3.1 SDSM will avoid construction, stormwater management and negative impacts due to restoration impacts in the core habitat areas and non-impact secondary habitats.

- The core and non-impact habitat areas will be surrounded by orange safety fence prior to commencement of earth moving. Locations of safety fence are included in site plans. The general contractor will inspect the fencing on a regular basis.

- Access to retained habitat areas during construction will be restricted through the use of education, safety fencing, and monitoring to ensure compliance. The project ecologist and site construction supervisor are currently collaborating in this regard.

3.2 A restoration and management plan for the entire site, including all of Rawson Woods, will be prepared.

- SDSM will commit budgets as documented in this plan to achieve the restoration and management goals for the retained Bluestem Goldenrod habitats. Budget commitments are provided in Section 5 of this plan.

- The scope of the restoration and management plan that is germane to the Bluestem Goldenrod is included in this document. In addition, the district will develop a detailed restoration and management plan for the entire school site. Plans submitted as part of this Bluestem Goldenrod Conservation Plan will be incorporated into the overall site restoration and management plan, including the implementation schedule, specifications and budgets.

- A Bluestem Goldenrod monitoring program will be initiated to document Bluestem Goldenrod populations and habitat conditions. Section 4 of this document addresses monitoring commitments.

- Habitat enhancement, restoration and management in core and non-impacted secondary habitat will involve the following specific management tasks, dates and methods.

  A. <u>Exotic shrub, sapling, and tree reduction</u>. Manual cutting, removal of cut material and direct wick application to cut stumps with Garlon 4A to minimize resprouting will be completed only during frozen (winter) ground conditions in the core and non-impact secondary habitat areas. Brush removal will be conducted so that no more than 30% of ambient light shall be available at the groundstory elevation in the location of Bluestem Goldenrod. This work will be done by professionals from Applied Ecological

Services with assistance from professionally supervised students and staff.

B. Exotic herbaceous vegetation reduction. Hand pulling and direct wick application with the herbicide Roundup (Glyphosphate), by trained professionals, will reduce garlic mustard, burdock, cool season grasses and other negative impact species such as poison ivy, Canada goldenrod, dandelion, plantain, yarrow and orchard grass that are currently invading into Bluestem Goldenrod populations in the core and non-impact secondary habitats. The reduction of exotic and invasive species will favor the Bluestem Goldenrod populations by reducing competition for light and nutrients from the negative impact species listed above. This work will be done in the fall of the year as exotics are preparing for dormancy, when herbicide translocation to root reserves is most effective and most damaging to these plants. At this time, Bluestem Goldenrods are very conspicuous and easily avoided. The use of the wick applicators -- in contrast to use of herbicide spraying (a technique that will not be used) -- allows for discriminating direct application of the herbicide to the target individual exotic plants. This work will be done by professionals from Applied Ecological Services with assistance from professionally supervised students and staff.

C. Native groundstory, vegetation enhancement plantings. Seeds collected for native woodland sedges, grasses and other species found growing within the Bluestem Goldenrod habitat will be hand collected annually in the June to August timeframe. Seeds will be collected from existing Rawson Woods populations and will be hand dispersed into bare ground areas in locations where exotic shrubs have shade suppressed and eliminated groundstory vegetation. Target locations include current eroding slopes north of Rawson Woods. If approved and permitted by WDNR, seeds from the Bluestem Goldenrod will also be collected and hand-dispersed into Rawson Woods. This work will be done by professionals from Applied Ecological Services with assistance from professionally supervised students and staff.

3.3 SDSM is committed to the development of educational programs and the involvement of students and staff in stewardship activities. The development of educational programs has already begun and shall be completed by spring, 2003.

- SDSM staff and AES have already begun a curriculum development process to involve staff and students in stewardship. The outcome of this process will be charted with a time line, scheduled events, and course outlines. Stewardship and monitoring activities are being extensively

integrated with the curriculum design. The curriculum design will be completed in spring, 2003.

3.4 SDSM will provide informational handouts and educate all construction staff, teachers and students about the Bluestem Goldenrod and its habitat.

- Information, documents, and training have already been prepared and presented. Construction meetings have occurred weekly during construction start-up and teleconferences have been held on an as-needed basis. Handouts have been developed, posted and distributed to construction staff.

- Fencing will be installed between the construction site and the Bluestem Goldenrod habitat to create a barrier to protect the Bluestem Goldenrod. Fencing will be installed as soon as WDNR approval is obtained.

4. Reporting and Monitoring

SDSM will conduct the follow up of the Bluestem Goldenrod population as detailed in the following table.

Project Year	**Monitoring Survey Level**	**Work Product**
Construction Period	Technical Re-survey of Individual Plants	Technical report on populations and status of individuals, submitted January 15
Year 1 –Post Development	Technical Re-survey of Individual Plants	Technical report on populations and status of individuals, submitted January 15
Year 2	Reconnaissance Survey	Two annual memoranda on status and recommendations, submitted July 30 and January 15
Year 3	Technical Re-survey of Individual Plants	Technical report on populations and status of individuals, submitted January 15
Year 4	Reconnaissance Survey	Two annual memoranda on status and recommendations, submitted July 30 and January 15

Year 5	Technical Re-survey of Individual Plants	Technical report on populations and status of individuals, submitted January 15
Years 6, 7, 8, 9	Reconnaissance Survey	Two annual memoranda on status and recommendations, submitted July 30 and January 15
Year 10	Technical Re-survey of Individual Plants	Technical report on populations and status of individuals, submitted January 15
After Year 10	Reconnaissance Survey	Two annual memoranda on status and recommendations, submitted July 30 and January 15

During the first ten years the monitoring program will include four years (5 surveys) of intensive survey and six years (6 surveys) of reconnaissance level survey.

4.1 Technical-level Monitoring: Construction Years and Post-Development Years 1, 3, 5, 10

Technical-level monitoring will occur during site construction and post-construction years 1, 3, 5 and 10. Monitoring will include conducting counts and location surveys of plants in the core and non-impact secondary habitat areas where surveying was conducted in 2002.

The results from each year will be documented in a technical report. This technical report shall summarize the survey results for Bluestem Goldenrod and its habitat conditions. Reports shall be submitted annually by January 15 to the WDNR Endangered Resources Program's Incidental Take Consultation Specialist.

4.2 Post-Development Years 2, 4, 6, 7, 8, 9 and annually after year 10

The project ecologist will provide two written memoranda for each year 2, 4, 6, 7, 8, 9 and then annually after year 10. Reconnaissance-level field investigations will be conducted during each of these years, one in early summer and the second in late summer. The findings in these memoranda will summarize the ecological conditions of the site. Reports will include a general description of the habitat and species associated with Bluestem Goldenrod, as well as a visual estimate of the number of Bluestem Goldenrod plants, and observations regarding ecological trends.

After year 10, SDSM will continue monitoring with an annual reconnaissance-level survey to replace the formalized Bluestem Goldenrod and habitat-monitoring program. The same twice-annual inspection visit will be conducted by the project ecologist to ensure that the site habitat conditions and goals are being maintained and achieved. Reports from monitoring after year 10 will be provided via the Natural Heritage Inventory's Rare Plant Reporting form.

The results from each survey in years 2, 4, 6, 7, 8, 9 and 10 will be documented in reconnaissance-level summary reports. These reports shall summarize the survey results for Bluestem Goldenrod and its habitat conditions. Reports shall be submitted each year of reconnaissance-level monitoring by July 30 and January 15 to the WDNR Endangered Resources Program's Incidental Take Consultation Specialist.

4.3 Reporting

During all years above, although the level of detail will vary, the technical monitoring and reconnaissance-level survey results will be reported annually to identify habitat conditions and problems (e.g. erosion, debris, human use and disturbances to Bluestem Goldenrod habitat, exotic species issues, etc.), and to make recommendations for refinement of the perpetual restoration, management and stewardship program for all natural resources. Reports will be submitted by the dates indicated in the above table and in sections 4.1 and 4.2 to the WDNR Endangered Resources Program's Incidental Take Consultation Specialist. Monitoring data will be used to contribute to the survival and recovery of this population. By applying the best professional judgment and analysis, this data will help assess the short and long-term impacts the project has had on the population of Bluestem Goldenrod in the area.

5. Available Funding for Implementation

SDSM estimates that the total cost of the school development project and ecological restoration program that includes Bluestem Goldenrod habitat protection and enhancement will be approximately $45 million dollars. The cost to avoid, minimize, protect and conduct restoration of the Bluestem Goldenrod (including monitoring and site management, but excluding actions that would be conducted regardless of the presence of the Bluestem Goldenrod, e.g., re-seeding and silt fencing), is not expected to exceed $50,000 during the first five years of the site construction phase and approximately $5,000 annually during Years 5-10. After Year 10, SDSM will budget $2,000 per year for two annual inspections of the Bluestem Goldenrod and the generation of two memoranda recommending stewardship program needs.

6. Alternatives Analysis

SDSM has worked closely with WDNR to understand how to avoid and minimize impacts to the Bluestem Goldenrod in the property, as well as other natural resources

located on the property. Please see the original Application for Water Quality Certification and the four addenda to review in detail the alternatives analysis for the entire project.

In summary, SDSM evaluated other sites for the new school in South Milwaukee, but no sites existed for development of the necessary facilities required by the community. Due to the condition of the existing middle school, inability to comprehensively renovate due to the physical condition and prohibitive cost of renovation, and program needs of the middle school and high school, not building a new school is not an option.

Alternative analysis has been completed specifically regarding the Bluestem Goldenrod. SDSM evaluated innumerable options for reducing Bluestem Goldenrod impact in the project site by moving, consolidating, relocating and abandoning various infrastructure and school site plan development components. This process has involved investigations of each design element of the plan, such as is the stadium necessary; how many practice/athletic fields are needed; and where were each essential. Roadway and parking lot locations were altered to reduce impacts and their alignments and sizes were varied as a part of an alternative analysis process. Options for stormwater management were evaluated to avoid and minimize impacts. Adjustments to the new school footprint and layout were made.

In short, the alternative analyses concluded with the WDNR's preliminary agreement on the developed areas, and the establishment of commitments to avoid and minimize impact of the Bluestem Goldenrod takings now presented in this plan.

From the onset of the alternatives analyses process, the outcomes have included the following:

- Establishment of core and non-impact secondary habitat areas with Bluestem Goldenrod populations that will be protected in the property. The process also resulted in the establishment and protection of numerous open spaces and natural resources areas in the SDSM project site. These include leased Milwaukee County property, former Falk property purchased by the district, and property the district has owned for a number of years.

- Relocation of tennis courts and one practice field to areas west of 15th Avenue and north of Oak Creek Parkway, respectively, to reduce the footprint of impact in sensitive areas.

- Realignment of roads and redesign of parking lots to avoid impacts to Bluestem Goldenrod habitat.

- Realignment of the practice/physical education field located north of Rawson Woods.

- Implementation of a restoration, management and stewardship program for all natural resource areas in the property that will remain after site development occurs and other areas to be created as a part of the stormwater management system (e.g. created and restored wetlands and prairies).

SDSM has avoided and minimized the loss of Bluestem Goldenrod individuals (3) that is practicable. The practice field that is proposed to be located where the taking would need to occur is necessary to support the middle school and high school physical education curriculum, as well as provide after school practice space for middle school and high school athletics.

There will be an average of 952 students on the athletic/practice/play fields each school day during physical education classes. Additionally, there will be an average of 430 students per day practicing on the fields after school to early evening due to athletic team practices in both the fall and spring seasons. Finally, there will be various formal recreation teams and events practicing or competing on the fields on school days, weekends, and summer months, as well as times the district will make the fields available for informal use by the citizens of South Milwaukee and Milwaukee County.

The current site plan that is being recommended has three fields that could potentially be used for physical education classes, plus the softball and baseball outfields. The plan at this time allows for middle school physical education classes to take place at the field between Rawson Woods and the parking lot or on the outfield of the softball diamonds. (The baseball diamond and the other fields are not practical places for middle school physical education classes due to the location and the time needed to get to the fields. The walk was timed and it took five minutes for a single person to walk the route from the existing gym to the outfield of the baseball diamond. Taking into account the fact that an average of 28 students are in one class with one teacher and that students are required to change into gym clothes for each class, the 47-minute middle school class in actuality becomes less than 20 minutes of instructional time.)

The high school physical education classes will take place on the practice field across Oak Creek Parkway or the field east of the stadium. Other fields are either occupied or too far away to make them practical for physical education classes.

The soccer fields that will be developed at the current middle school site are not being recommended for use by physical education classes. With a 47-minute class for middle school students and a 52-minute class for high school students, after time to change into gym clothes and walking/running to the site and back to the school, there would be at best 15 minutes of actual instructional time for class. Additionally, with only one teacher per class, a lack of sidewalks along the entire route, a very busy street and unsafe intersection to cross (Chicago Avenue), and a varied ability level between students, the school district determined that students traveling to this site would be too unsafe to further pursue this option.

In addition to all the practice/physical education fields being used continually throughout the school day, the fields will also be used after school through sunset. In the fall there will be four middle school football teams and three high school football teams that need to practice on this site, as well as two cross country teams, and three tennis teams, for an average of 430 students outside on one site from after school until early evening. The fall seasons typically run through the end of October. On October 23, 2002, the date of the last scheduled football game, sunset will be at 6:00 p.m. Therefore, with no lights on practice fields, the 430 students will need to use the four fields between 3:30 and 6:00 each day. The same scenario is true in the spring with approximately the same number of students and teams in golf, track, tennis, softball and baseball.

In the fall and spring there will be an average of 1,382 students using the fields at that site between approximately 7:30 a.m. and 6:00 p.m. The district has moved the competition and practice soccer fields to the existing middle school site, has moved the tennis courts across the street to the same area as the baseball diamond, and has moved one practice/PE field across Oak Creek Parkway in an attempt to minimize the impact of the construction project on the existing man-made wetlands on the Falk and county land.

Therefore, the physical education/practice field located north of Rawson Woods is necessary and the taking of three (3) Bluestem Goldenrod is necessary to create the field.

7. Implementing Agreement

SDSM commits the resources and agrees to protect, manage and restore Bluestem Goldenrod primary habitats as provided under this Conservation and Management Plan.

SDSM assumes complete responsibility for the implementation of this Conservation and Management Plan. SDSM has chosen their agent, Applied Ecological Services, Inc. (AES), to implement and oversee this conservation plan during the construction and restoration implementation phases 2003-2008.

AES will be present at the construction site before the taking of the Bluestem Goldenrod to review with the construction company which plants will be taken. AES will also inspect the fencing between the proposed construction site and the Bluestem Goldenrod habitat to ensure that all Bluestem Goldenrod are outside of the construction zone.

SDSM shall provide WDNR, and copy Milwaukee County with any changes in this assignment of responsibilities should changes be made in the future. The superintendent of the South Milwaukee School District shall be the principle contact for administrative questions on this conservation plan. The current superintendent is David Ewald, School District of South Milwaukee, 1225 Memorial Drive, South Milwaukee, Wisconsin, 53172, 414-768-6300.

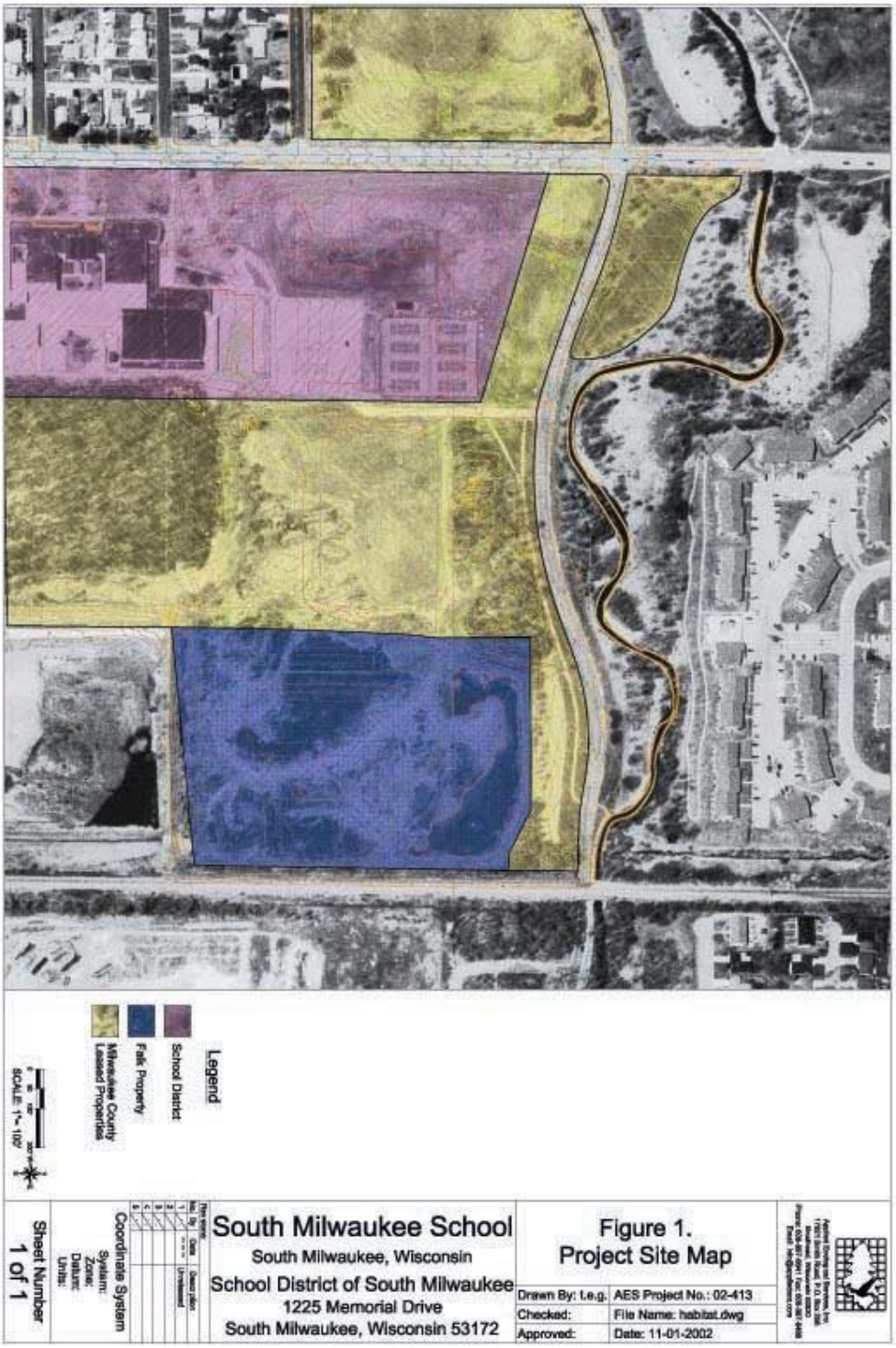
At this point in time the following party is responsible for implementation of this program, and shall be the contact:

Steven I. Apfelbaum
Applied Ecological Services, Inc.
17921 Smith Rd.
Brodhead, WI 53520
608-897-8641 office
608-897-8486 Fax
608-201-9375 cell
608-897-8563 home
steve@appliedeco.com

8. Other Measures

SDSM commits to work cooperative with WDNR on any other measures the department deems vital to the success of this Conservation and Management Plan, or other measures WDNR identifies as necessary and appropriate.

Figure 1.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School District
Falk Property
Milwaukee County Leased Properties
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1 Unreleased
South Milwaukee School
South Milwaukee, Wisconsin
School District of South Milwaukee
1225 Memorial Drive
South Milwaukee, Wisconsin 53172
Figure 1.
Project Site Map
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AES Project No.: 02-413
Checked:
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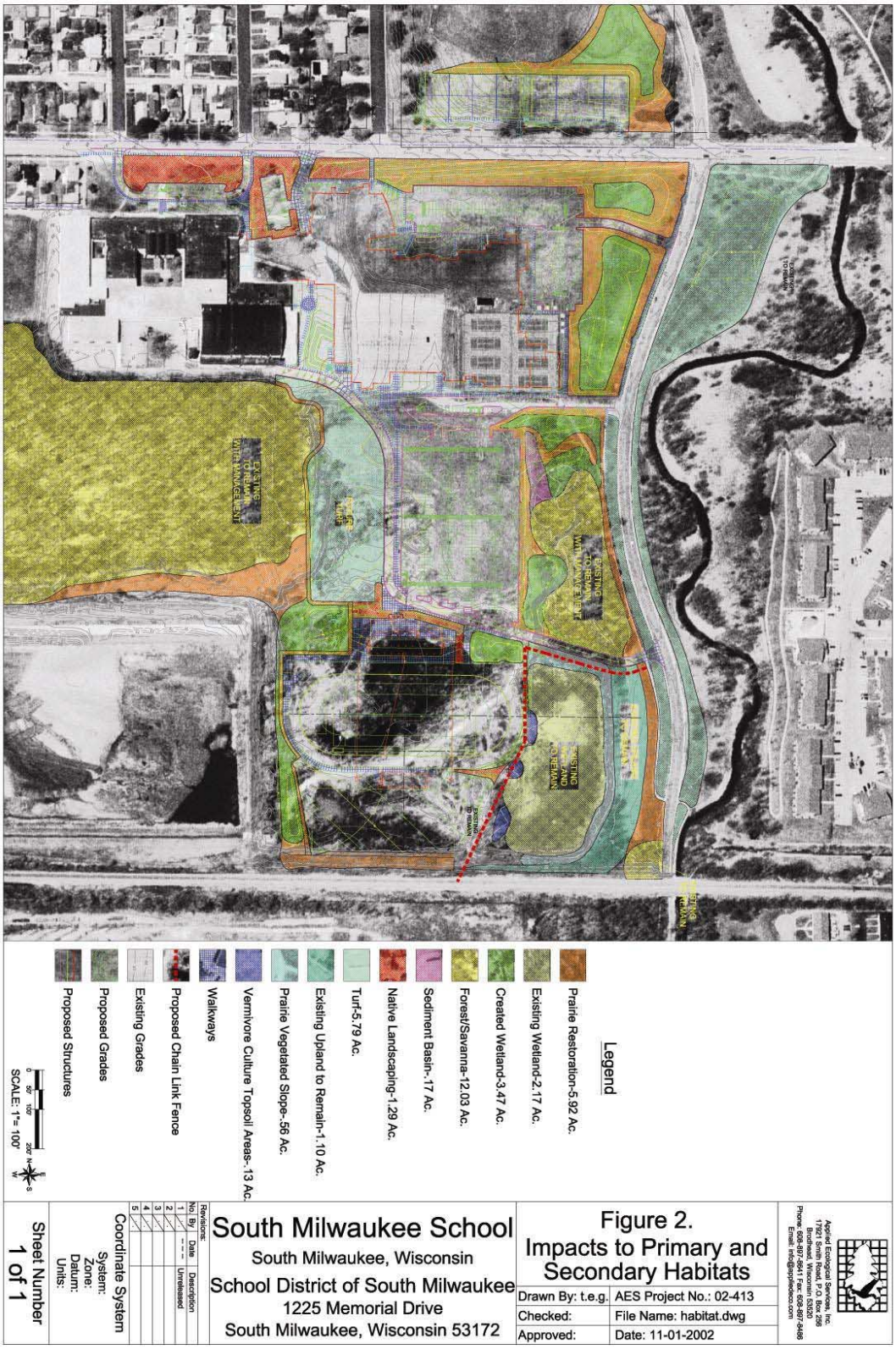
Approved:
Date: 11-01-2002

Figure 2.


Legend
Prairie Restoration-5.92 Ac.
Existing Wetland-2.17 Ac.
Created Wetland-3.47 Ac.
Forest/Savanna-12.03 Ac.
Sediment Basin-.17 Ac.
Native Landscaping-1.29 Ac.
Turf-5.79 Ac.
Existing Upland to Remain-1.10 Ac.
Prairie Vegetated Slope-.56 Ac.
Vermivore Culture Topsoil Areas-.13 Ac.
Walkways
Proposed Chain Link Fence
Existing Grades
Proposed Grades
Proposed Structures
SCALE: 1"= 100'
EXISTING TO REMAIN WITH MANAGEMENT
EXISTING TO REMAIN
Applied Ecological Services, Inc.
17921 Smith Road, P.O. Box 256
Brodhead, Wisconsin 53520
Phone: (608) 897-8641 FAX: (608) 897-8486
Email: info@appliedeco.com
Figure 2.
Impacts to Primary and Secondary Habitats
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AES Project No.: 02-413
Checked:
File Name: habitat.dwg
Approved:
Date: 11-01-2002
South Milwaukee School
South Milwaukee, Wisconsin
School District of South Milwaukee
1225 Memorial Drive
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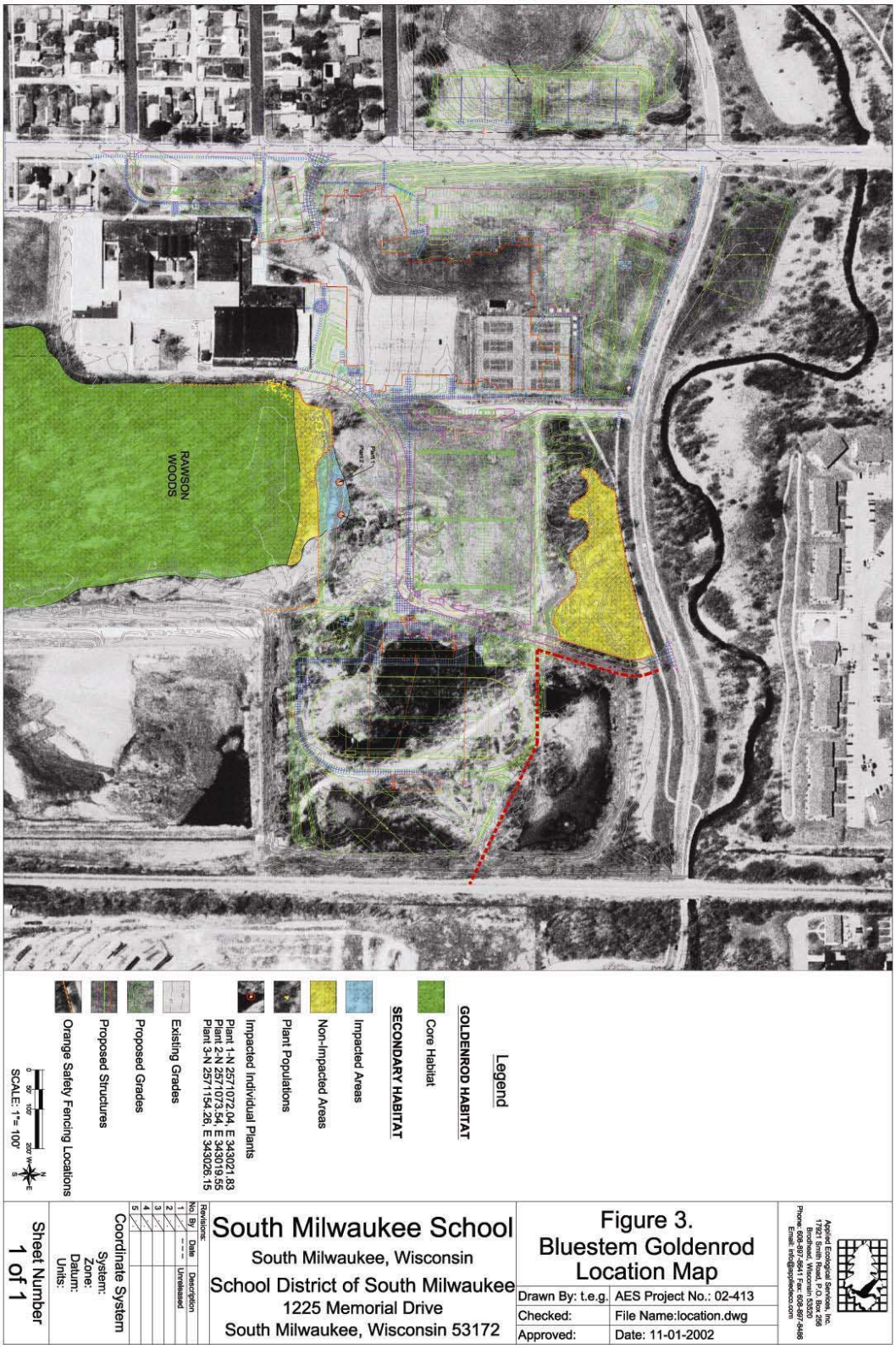
Sheet Number
1 of 1

Figure 3.


RAWSON WOODS
Legend
GOLDENROD HABITAT
Core Habitat
SECONDARY HABITAT
Impacted Areas
Non-Impacted Areas
Plant Populations
Impacted Individual Plants
Plant 1-N 2571072.04, E 343021.83
Plant 2-N 2571073.54, E 343019.45
Plant 3-N 2571154.26, E 343026.15
Existing Grades
Proposed Grades
Proposed Structures
Orange Safety Fencing Locations
SCALE: 1"= 100'
South Milwaukee School
South Milwaukee, Wisconsin
School District of South Milwaukee
1225 Memorial Drive
South Milwaukee, Wisconsin 53172
Figure 3.
Bluestem Goldenrod
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File Name:location.dwg
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Applied Ecological Services, Inc.
17921 Smith Road, P.O. Box 256
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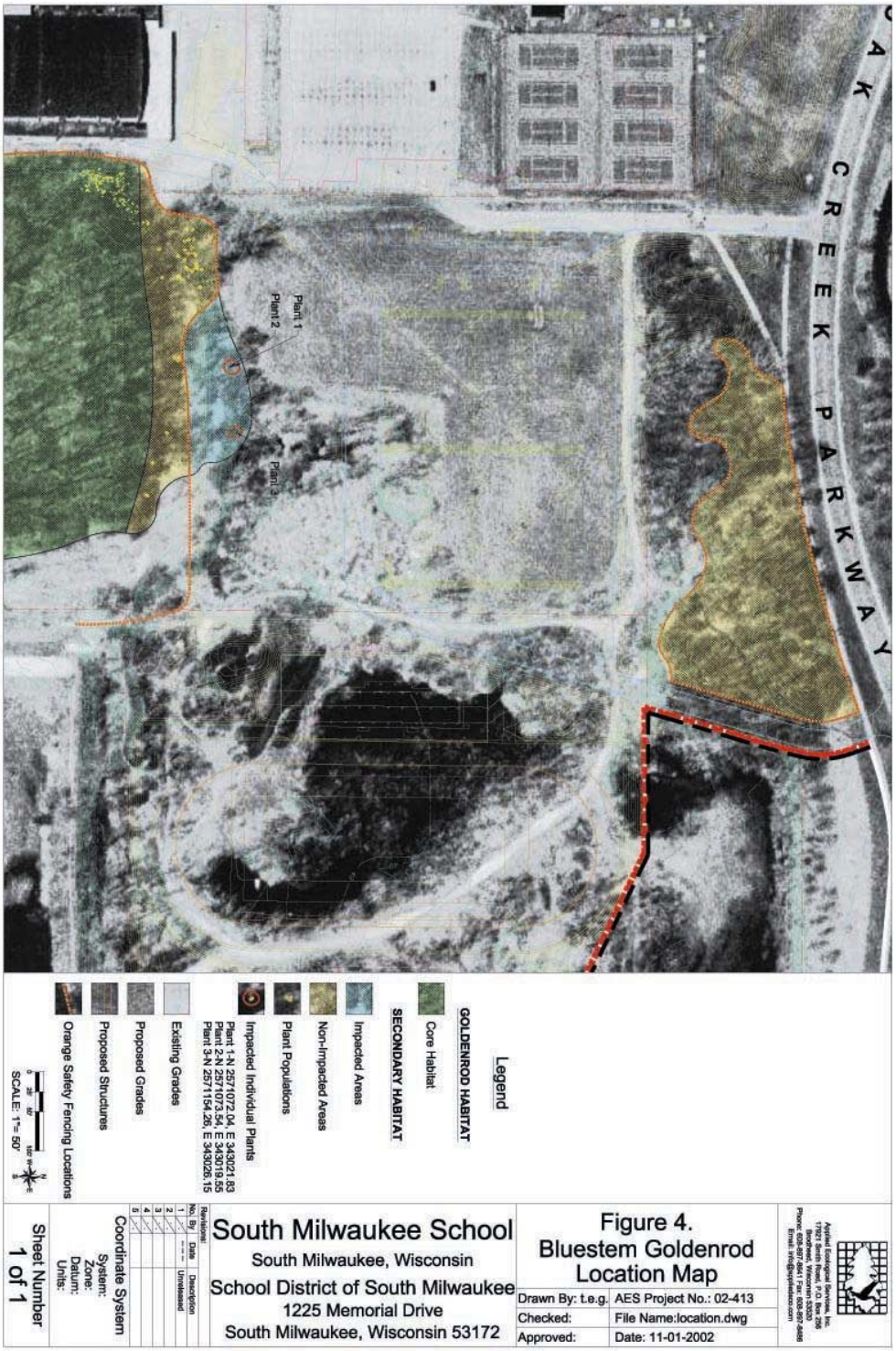
Units:
Sheet Number
1 of 1

Figure 4.


OAK CREEK PARKWAY
Plant 1
Plant 2
Plant 3
Legend
GOLDENROD HABITAT
Core Habitat
SECONDARY HABITAT
Impacted Areas
Non-Impacted Areas
Plant Populations
Impacted Individual Plants
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Plant 2-N 2571073.54 E 343019.55
Plant 3-N 2571154.26 E 343026.15
Existing Grades
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Proposed Structures
Orange Safety Fencing Locations
SCALE: 1"= 50'
South Milwaukee School
South Milwaukee, Wisconsin
School District of South Milwaukee
1225 Memorial Drive
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Bluestem Goldenrod
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Revisions
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